Abstract 117

TITLE: Rapid HIV Testing vs. Traditional Testing: In A Public Health Outreach Setting

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OBJECTIVES: To compare the performance of a fingerstick-based HIV rapid test against a traditional serum-based EIA screening assay. This assessment is to target a high volume, high seroprevalent public health outreach setting. We are evaluating this rapid test on the basis of its potential benefit to identify and assess those individuals of unknown HIV serostatus. These individuals most often avoid traditional public health clinic settings.

METHODS: A total of 277 paired specimens of fingersticks and venous blood were obtained from clients requesting an HIV test at River Region Human Services, Inc. (RRHS), a substance abuse treatment and prevention center. The fingerstick samples were tested by a rapid test (Quix HIV-1-2-0, Universal HealthWatch, Inc.) designed to detect HIV-1/2 and Group 0 antibodies. This rapid test was primarily performed in a non-laboratory setting by RRHS personnel trainer by the assay manufacturer. Sera derived from the venous bloods were tested for HIV-1/2 antibodies by an FDA approved synthetic peptide EIA (Sanofi Diagnostic Pasteur, Inc.) at the Florida Bureau of Laboratories (FBL), by licensed laboratory technologists. Repeatedly reactive samples were further tested by Western Blot and PCR when indicated.

RESULTS: Of the 277 patients, the rapid test correctly identified 20 of 20 HIV-1 seropositive individuals yielding a sensitivity of 100%. The assay also correctly identified 254 of 257 seronegative for a specificity of 98.9%. The PPV and NPV of the rapid assay is 87% and 100% respectively. The three (3) false positives encountered by the rapid assay were weak HIV-1 reactives as determined by RRHS and FBL personnel. All three patients were negative for HIV-1 by NASBA, a qualitative HIV-l RNA amplification procedure.

CONCLUSION: HIV prevalence in this outreach population was 7.2%, approximately twice the state average. This high seroprevalence in conjunction with the rapid test sensitivity level tends to make it favorable for reaching a population of unknown HIV serostatus, for partner notification and for patient care management. However, the specificity of the rapid test is less than traditional laboratory based testing. This increased false positivity will require more supplemental testing to reach a true serostatus. In a less seroprevalent population, the lower specificity may create a testing burden. The rapid test examined appears to be very useful for outreach and surveillance purposes. For this assay to become routine in clinic practices, we feel specificity must improve. Multiple rapid assays, used in combinations, may be an option to provide high quality, reliable results.

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